

ORIGINAL ARTICLE

Strengthening National Health Insurance With Ideal Regulations on the Distribution of Foods Containing Sugar, Salt, and Fat to Prevent Obesity and Non-communicable Diseases in Children

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ABSTRACT

Introduction: The data from the Minister of Health showed that 28.7% of Indonesian society consumes sugar, salt, and fat (SSF) more than the indicated limit stipulated in the Regulation of the Minister of Health No. 63 of 2015. The allocation of funds for non-communicable diseases due to the SSF issued by the National Health Security through the *Badan Penyelenggara Jaminan Sosial* (Social Security Establishing Agency, abbreviated BPJS) reaches around 68% from the total amount of funds. This paper aims to analyze the strengthening of the National Health Security through the policy/regulation on food distribution (especially food/drinks for children) that contain SSF in preventing the issue of obesity and non-communicable diseases. **Materials and methods:** This was qualitative research based on imperative and perspective naturalistic paradigms. This research utilized the legal theory for analyze research problem. **Results:** It was found that children's high consumption of SSF increases the prevalence of obesity and non-communicable diseases in children. There are already regulations related to SSF products. It is highly probable to strengthen the National Health Security through regulations limiting the SSF as well as decrease the SSF consumption. **Conclusion:** The government should intervene by taxing foods containing high SSF contents and limiting the permits of such products. Apart from that, the government should allocate the tax funds of foods containing SSF to BPJS Health to strengthen the BPJS.

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INTRODUCTION

It is shown that there is an epidemiological transition, followed by a demographic and technological transition on the patterns of diseases that become the main causes of death in Indonesia (1). There is a shift in disease

patterns from infectious diseases to non-communicable diseases (NCDs) that then becomes the main factor causing morbidity and mortality (2). The WHO estimated that in 2020, NCDs become the cause of 73% of deaths and 60% of all diseases in the world. NCDs are the most crucial cause of death in the 21st century. More than 60% of deaths were caused by NCDs, including cardiovascular diseases, cancer, chronic obstructive lung disease, and diabetes (3). Data from the WHO estimated the NCDs became the cause of 74% of deaths and 62% of all diseases in the world (4).



Figure 1: Non-Communicable Diseases: Cancer, Obesity, Cardiovascular Diseases, Hypertension, and Diabetes.

NCDs may be caused by many factors, including obesity from a young age. Obesity during childhood and adolescence will increase the risk of obesity in adulthood. Child obesity may cause an increase in blood pressure. Apart from that, it increases the risk of cardiovascular diseases in adulthood (4).

Schoolchildren are children from the age range of 6 to 12 years old. School age is the second most rapid development period after the toddler period (5). But school children tend to be exposed to snacks as only 5% of them bring food from home although they spend a quarter of their day at school. School children generally buy snacks without paying attention to their nutritional values and safety as they are deemed more desirable (6).

The contents of substances such as carbohydrates and fat in snacks are usually more dominant compared to other nutrients. A high consumption of energy, fat, salt, and sugar that is accompanied by low energy usage due to a lack of physical activities and a sedentary lifestyle may lead to obesity. Obesity is not only influenced by food consumption and a lack of activities. This actually shows that there is a link between the increase in sugar, salt, and fat consumption and the increase in deaths and illnesses due to non-communicable diseases (7).

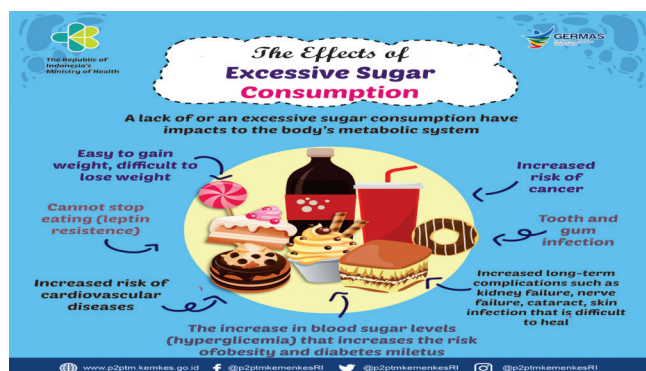


Figure 2: Minimum or excessive sugar consumption may have impacts on the body's metabolic system.

People can easily gain weight and it is difficult to lose weight. They cannot stop eating (leptin resistance). There is an increased risk of cardiovascular diseases. The increase in blood sugar level (hyperglycemia) may increase the risk for obesity and diabetes mellitus. Long term complication includes kidney damage, nerve damage, cataract, a skin infection that is difficult to heal, an increased risk of cancer, as well as gum and teeth infections. Indonesian Basic Health Research showed that in 2018, there was an improvement in toddlers' nutritional status (8). The nutritional status of 'very short' and 'short' decreased to 30.8% from 37.2%. Then, the status of 'malnutrition' decreased to 17.7% from 19.6%. However, the trend in the increase of obesity in adults has increased since the 2007 Basic Health Research, which was 10.5%. In 2013, it was 14.8%. Then, in 2018, it was 21.8% (9).

Previous research was conducted by Ferencia et al. (10) on the correlation between salt, sugar, and fat and non-communicable diseases such as high blood pressure, obesity, and heart attacks. The difference between this research and the research of Ferencia et al. (10) is that the latter analyzes cases in adulthood. Meanwhile, this research analyzes such cases in childhood.

Another previous research was conducted by Atmarita et al. (11) who found that the Indonesian people's consumption level of sugar, salt and fat exceeds the WHO recommendations. The analysis used the data of Individual Food Consumption Survey or SKMI (*Survei Konsumsi Makanan Individu*) that collected data and asked respondents about all the food they consumed in the last 24 hours. This survey was conducted on 45,802 households and 145,360 household members in all provinces in Indonesia. A descriptive analysis of all 17 food groups was undertaken to calculate each individual's intake level of sugar, salt, and fat as well as calculated the proportion based on the characteristics of age group, sex, place of residence, socio-economic, and province of residence. The difference between this research and the study conducted by Atmarita et al. (11) is that the latter analyzes the correlation between sugar, salt, and fat consumption and the increase in obesity, hypertension, diabetes, and stroke. But this research specially analyzes children's consumption of sugar, salt, and fat.

People must undergo a good selection of food as choosing foods with high sugar, salt, and fat content may cause obesity. Obesity is the condition of the increase in body weight due to the excessive buildup of body fat (5). Obesity is a metabolic disease that is marked by an excessive accumulation of fat. The lack of physical activity is one of the causes of obesity. The condition of

obesity may be measured using the percentage of body fat which is defined as the proportion of one's body fat mass (12).

Table 1: Body Mass Index (13).

BMI (kg/m ²)	Classification	Health Risk
< 18,5	Underweight	Low
18,5-22,9	Normal	Average
> 23	Overweight	
23,0-26,9	Preobesity	Increased
≥ 27,0	Obesity	High

Body Mass Index Formula = Body Weight (kg) / height x height (m)

Overweightness and obesity in people indicate the abnormal or excessive buildup of fat that may disturb their health. Obesity can be said as a condition where a person's body builds up an overly abundant level of fat in the subcutaneous tissues that may result in the emergence of chronic diseases. Obesity may also happen to children. Obesity is one of the most serious health challenges of the global society that influences all countries in the world. The issue of obesity has also influenced children. Actions to handle obesity in children are carried out through their closest people, namely their families (14).

Obesity happens when there is an increase in the number and size of fat cells. Obesity is caused by the intake of food that is greater than its use by the body as energy. Buildup energy will be stored in the adipose tissue. Excessive weight and obesity happen due to an imbalance in energy intake and energy expenditures (15). Thus, there is an excessive amount of energy that will then be stored in the form of fat tissues. This excessive energy may be caused by the high energy intake or the low energy use (16).

Obesity in children brings negative impacts on the child's growth and development. The impacts of obesity in children include tending to suffer from obesity in adulthood. There is also a risk of suffering from metabolic and degenerative diseases. Obesity is a risk factor for cardiovascular diseases, hypertension, insulin resistance, type 2 diabetes mellitus (DM), orthopedic illnesses, and obstructive sleep apnea. Overweightness and obesity in children also have psychosocial impacts in children, such as having limitations in their social life and in undergoing physical activities.

This research found that the consumption of sugar that is more than 50 g (4 tablespoons), sodium that is more than 2000 mg (1 teaspoon), and fat/oil that is more than 67 g (5 tablespoons) each person daily will increase the risk of hypertension, stroke, diabetes, and heart attack (12).

The data from the Republic of Indonesia's Minister of Health also showed that 28.7% of Indonesian society consumes sugar, salt, and fat (SSF) more than the

indicated limit regulated in the Regulation of the Minister of Health No. 30 of 2013 which was amended with Regulation of the Minister of Health No. 63 of 2015. Meanwhile, 61.27% of Indonesian citizens over 3 years of age consume more than one sweetened drink per day, while 30.22% consume 1 to 6 sweetened drinks per day. Meanwhile, only 8.51% consume less than 3 sweetened drinks per month. Other data showed that the National Health Security Program established by the Badan Penyelenggara Jaminan Sosial (Social Security Establishing Agency, abbreviated BPJS) utilized 68% of the national health security funds for treating NCDs due to people's excessive amount of SSF consumption (14). Based on the background above, this paper's research problem is: "What is the ideal regulation on food distribution (especially food/drinks for children) that contain sugar, salt, and fat (SSF) like to strengthen the national health security and prevent the issue of obesity and NCDs?".

MATERIALS AND METHODS

According to Strauss and Corbin as quoted by Barbara (17), qualitative research is research whose findings are not merely obtained through statistics. However, these data allow analysis through a measurement. This research is based on imperative and naturalistic methods and it was analyzed using the intentional law theory written by George Pavlakov and Veronica Rodriguez Blanco. This theory was introduced by Blanco and Pavlakov who studied that the law is not made and run in a vacuum. Every law has an intention behind it; and this intention reflects the desire and goal of the lawmaker. This legal intention can be found in legal formulations, academic scripts, and in notes on the law-making process. According to this theory, it is impossible for lawmakers to create laws that harm themselves; but rather, they will create laws that align to their intention (18).

This intention may be illustrated in the constitution. It can be shown in the regulations, policies, or implementation. This intention is not explicitly nor clearly shown. However, one can find its implicit traces. For instance, in the law, there is the obligation to include the SSF contents in food, although there is no clear nor strict sanctions for the law violators. This means that the lawmakers do not intend to penalize producers of foods containing the SSF that violate the law. A clear and strict sanction in the legal regulations on the inclusion of SSF contents or the prohibition of foods with high SSF ingredients shows the seriousness of the government in criminalizing producers. Such an intention can be understood by the public as well as by the food producers.

Imperative means that this research is not based on common sense. But rather, it is based on positive evidence and rational knowledge that places a basis on observed proofs. Then, the naturalistic paradigm can

be defined as an approach that is qualitatively carried out. This means that it is an approach to explore and understand the meaning of the existing phenomena and socially describe them.

In qualitative research, the number of involved subjects is relatively small compared to quantitative research. Qualitative research generally focuses on understanding, discovery, and meaning. Methodologically, this research utilizes inductive logic through data categorization that is obtained during research to produce patterns or theories that can explain the occurring phenomena (19). The analysis that is commonly used is thematic analysis. In this research, the authors analyzed the following legal policies/regulations: Regulation of the Minister of Health No. 30 of 2013 and Regulation of the Food and Drug Supervisory Agency No. 22 of 2019 on Nutritional Values on Processed Food Labels as well as the alternative legal policies that are needed in the effort to limit salt, sugar, and fat to prevent non-communicable diseases (17). The process was carried out through the following stages: data reduction, data presentation, data analysis, and ending with conclusion drawing. Then, finally, the conclusion and findings were validated. This validation was carried out by verifying the research findings so that the data that were found and that emerged were valid.

Ethical clearance

This study approved by research ethic committee faculty of law Universitas Muhammadiyah Surakarta No. 867/FH/A.3/II/VI/2024.

RESULTS

Society has experienced changes in food consumption, where there has been a great demand for packaged foods as meals or snacks. These consumed packaged foods were generally processed foods that have gone through a certain process with food additives such as flavoring, coloring, preservatives, etc.

To obtain flavors that attract consumers, it was not seldom that producers add food additives, especially sugar, salt, and oil, in an amount which exceeded the maximum daily intake. Society was of the opinion that the excessive consumption of sugar, salt, and fat may cause diseases and decrease the body's immunity (20). SSF was an abbreviation for sugar, salt, and fat that people consume every day. There were rules to their consumption. They cannot be freely consumed if one desires a healthier life.

The analysis showed that 77 million people or 29.7 percent of Indonesia's population consumed sugar, salt, and fat exceeding WHO recommendations: sugar (> 50 g/day), salt (> 5 g/day), and fat (> 67 g/day). This should be anticipated due to the increasing trend of people with non-communicable diseases, such as obesity,

hypertension, diabetes mellitus, and stroke which have already been apparent since 2013.

One of the issues that is faced in the current health development is the pattern shift from infectious diseases to non-communicable diseases (21). The high prevalence of NCDs brings impacts to the decrease in productivity. It causes disturbances in fulfilling the daily needs of life. The WHO estimates that NCDs cause 56% of all deaths and 44% of diseases in Southeast Asian countries. Almost half of deaths caused by NCDs happen at earlier stages, namely the most productive phase of life. Thus, this condition poses serious threats to society's socio-economic level. Moreover, the prevalence of NCDs in developing countries has a tendency to increase, including among poor citizens, due to the limited access to health services (22).

NCDs are known as diseases that cannot be spread from one person to another. There are four main types of NCDs, namely cardiovascular diseases, cancer, chronic respiratory diseases, and diabetes. Modern lifestyle has changed human attitudes and behavior, including eating patterns, smoking habits, as well as alcohol and drug consumption as a lifestyle. Thus, the number of degenerative disease sufferers (diseases caused by the decreasing function of the bodily organs) has increased. Such diseases may threaten their lives (23).

General risk factors include unhealthy food consumption (the lack of variety and nutritional balance as well as the consumption of unsafe foods), the lack of (inadequate and irregular) physical activities, smoking, and the consumption of alcohol. These are hidden issues as they are not truly known and understood as causes of NCDs. Risk factors such as overweightness and obesity, hypertension, as well as the abnormal increase in blood sugar and blood fat become the triggers for cardiovascular diseases, stroke, diabetes, and cancer (19).

Indonesia was ranked third in the consumption of sugar-sweetened beverages (20.23 liters/person) in Southeast Asia (24). The high consumption of SSF contributed to the high rate of mortality and morbidity due to excessive weight, obesity, and NCDs (such as diabetes and cardiovascular diseases). All this is caused by a lack of sanctions for companies that fail to comply with the laws that regulate the SSF in producing their goods. The impact of this is the increase in out-of-pocket expenditures for health treatment.

This issue was worsened by the lack of adequate regulatory implementation to control the availability, accessibility, convenience, industrial interference, as well as the marketing of the SSF (25). As a result, BPJS as the establisher of the National Health Security in Indonesia allocated 68% of its total health security funds to treat NCDs related to SSF consumption (26). This is

a great allocation of funds. Thus, no funds were spared for preventing such diseases, as they were allocated to cure and treat people with NCDs related to excessive consumption of SSF.

DISCUSSION

Regulations on the Distribution of Foods Containing Sugar, Salt, and Fat to Prevent Obesity and Non-Communicable Diseases in Children and to Strengthen the National Health Security

The daily consumption of SSF was regulated in the Regulation of the Minister of Health No. 30 of 2013. This regulation stipulated the obligation to display information on SSF contents as well as displaying health messages in all fast foods and processed foods. According to this regulation, the suggested sugar consumption for each person each day was 10% of the total energy (200 kcal). This consumption was equal to 4 tablespoons of sugar per person per day or 50 grams per person per day. Then, the suggested salt consumption was 2000 mg of sodium for every person daily which was equal to 1 teaspoon of salt per person per day or five grams per person per day. The suggested fat consumption per person per day was 20-25% of the total energy (702 kcal) for every person daily. This fat consumption was equal to 5 tablespoons or 67 grams for each person daily. It is crucial to become aware of this SSF consumption to prevent the excessiveness or lack of SSF consumption (27).

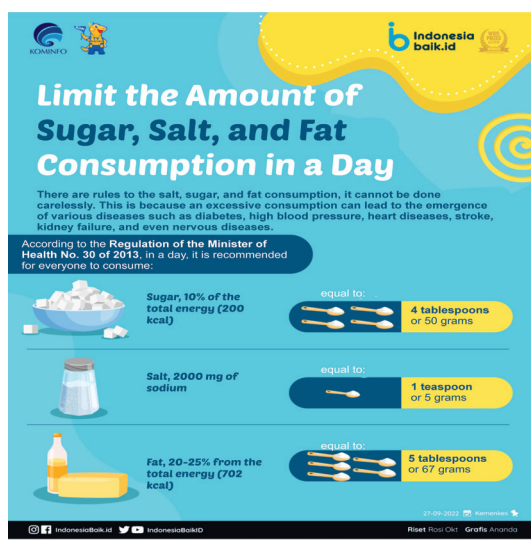


Figure 3: Limit Consumption of Sugar, Salt and Fat on one day.

Figure 3 The limits in SSF consumption regulated in the Regulation of the Minister of Health No. 30 of 2013, where sugar is 10% of the total energy (which is 200kcal) or 4 tablespoons or 50 grams. For salt, it is 2000 mg of sodium which is equal to 1 teaspoon or five grams. For fat, it is 20-25% of the total energy which is equal to 5 tablespoons or 67 grams. SSF was an abbreviation of sugar, salt, and fat that people consume daily. There were rules on the safe consumption of these three

substances to guarantee good health. Indonesia was ranked third in the amount of sugar-sweetened beverage consumption in Southeast Asia, which reached 20.23 liters/person (24).

The high SSF consumption contributed to the high rate of mortality and morbidity due to overweightness, obesity, NCDs (such as diabetes and cardiovascular diseases) and the increase in health treatment expenditures. This issue was worsened by the lack of adequate regulatory implementation to control the provision, accessibility, convenience, industrial interference, and marketing of the SSF (25). Changes in lifestyle, ameliorated by the existence of the food industry, resulted in the decreased number of families that prepare their own meals. The food industry provided food with high calories, simple carbohydrates, and fat. Children liked to consume such foods, increasing their risk of obesity.

The increased consumption of high-carbohydrate drinks, such as carbonated drinks, energy drinks, and fruit juices increased this factor. The low level of physical activity in children and adults was caused by the rife numbers of vehicles and the decreased interest in walking. Televisions, computers, video games, and other entertainment media led children to lack physical activity. This was added to perceptions of the dangers outside of the home (such as fear of kidnapping and assault), causing children to stay inside.

The increased period of sleep in children and adults also increased the risk of obesity, with higher risks for children compared to adults. The decrease in the sleep period was linked to the decline in leptin and the rise in ghrelin rate which upsurged the sense of hunger.

The following list showed some of the Republic of Indonesia's policies related to SSF:

1. The daily consumption of SSF was regulated in the Regulation of the Ministry of Health No. 30 of 2013. This regulation stipulated the obligation to declare the contents of SSF as well as health messages on fast foods and processed foods. According to this regulation, the suggested daily sugar intake for each person was 10% of the total energy consumption (200 kcal).
2. The Regulation of the Food and Drug Supervisory Agency (*Badan Pengawas Obat dan Makanan/BPOM*) No. 21 of 2018 on Food Categories stated that SSF consisted of several forms, including processed drinks (carbonated and non-carbonated), fruit juices, concentrates, and processed foods.
3. Regulation of the Food and Drug Supervisory Agency No. 22 of 2019 on Nutritional Values on Processed Food Labels stated that all food products, except for alcohol, must all inform nutritional labels. The information on the nutritional values was supported by the Food and Drug Supervisory Agency with a letter of proof from

a licensed public laboratory that had the authority to undergo an examination.

4. The government had also issued the Regulation of the Republic of Indonesia's Minister No. 41 of 2014 on the Guidelines to Balanced Nutrition which contained references or suggestions on daily SSF consumption (28).

5. Through duty tax collections, the government strived to control sugar and salt consumption. According to Law No. 39 of 2007, duty tax was a state collection that was imposed on certain goods that have certain characteristics determined in the law.

From all these regulations, it is a fact that there are stipulations which regulate the obligation to include the amount of SSF content in the manufactured food products. However, there are no clear and strict sanctions on the producers of food commodities. These regulations also lack special stipulations on the control of foods and drinks with high SSF, such as the imposition of special taxes for foods with high SSF contents. According to Article 4 clause (1) of Law No. 39, up to now, duty tax has been imposed on three types of goods, namely ethyl alcohol, drinks containing ethyl alcohol, and tobacco products. Apart from the Regulation of the Minister of Health, an explanation of the SSF was also provided in the Regulation of the Food and Drug Supervisory Agency No. 21 of 2018 on the Food Category. It stated that the SSF may take the forms of processed drinks (carbonated and non-carbonated), fruit juices, concentrates, and processed foods.

Even though the government had not provided a specific definition of the SSF, the Indonesian Food and Drug Supervisory Agency issued Regulation No. 22 of 2019 on the Nutritional Values on the Labels of Processed Foods. This regulation stated that all food products, except for alcohol, must include nutritional labels. The information on the nutritional values was supported by the Food and Drug Supervisory Agency with a letter of proof from a licensed laboratory or a public/government-owned laboratory that had the authority to undergo such an examination.

The Ministry of Health and the Food and Drug Supervisory Agency have the authority to determine the concept of sugar intake for the human body. However, they did not have the same statement on the maximum standard of the sugar consumption limit. The Ministry of Health issued a national regulation which stated that sugar consumption cannot exceed 50 grams per person daily (which equals to 4 tablespoons), while the maximum salt consumption was 3 grams a day for children (28).

Even though the Indonesian Ministry of Health as well as the Food and Drug Supervisory Agency have the authority to issue laws, but they do not create

regulations to control the spike in the SSF consumption. Thus, BPJS allocates a great amount of funds for treating people with NCDs due to the excessive consumption of the SSF. There is the reluctance to formulate regulations that sanction the violators of the obligation to include SSF contents. The government also lacks any action to prevent the excessive addition of SSF to food and beverage products. This condition is according to the intention law theory, who stated that a lack of a highly necessary regulation over a long period of time shows the lack of the lawmakers' intention in creating such a legal regulation (18,26).

In this case, lawmakers do not have the intention to control the increase in SSF (i.e., the control of NCDs) nor strengthen the Indonesian national health security system. There should be the formulation of laws and policies on the SSF control with clear sanctions, including the imposition of fines for foods with high SSF contents. Then, the funds obtained from these fines should be used by BPJS Health to support the treatment of NCDs due to the high consumption of SSF.



Figure 4: Effect of the over consumption of sugar on the Non Communicable Disease.

Figure 4, the effects of excessive sugar consumption towards non-communicable diseases. The lack of or the excessive consumption of sugar has impacts towards the body's metabolic system. The excessive consumption of sugar may make the insulin become resistant, meaning that it cannot carry out its metabolic function of turning sugar into energy. Thus, there is an increase in the level of blood sugar (hyperglycemia) that brings risks towards the occurrence of obesity and diabetes mellitus. Uncontrolled diabetes will risk damaging other bodily organs such as the heart, kidneys, etc.

This amount was the same as the index of sugar intake determined by the WHO. The WHO guidelines recommended that adults and children should decrease the sugar, salt, and fat consumption to less than 10% of their daily energy intake to prevent obesity. On the other hand, regulations of the Indonesian Food and

Drug Supervisory Agency also encouraged companies to undergo reformulation by decreasing the sugar level to 6 grams per 100 ml (29).

The government also issued guidelines for a balanced diet which contained references/recommendations for daily consumption (28). However, the food and beverage industries keep on experiencing advancements. Thus, it seemed that society lacked consideration for those recommendations. The Governmental Regulation No. 69 of 1999 on food labels did not oblige the inclusion of information on sugar, salt, and fat contents in every product. This contradicted the Indonesian Ministry of Health Regulation No. 30 of 2013. The dualization of these regulations led to the desynchronization of laws. Since the Governmental Regulation No. 69 of 1999 had a stronger position compared to the Ministry of Health Regulation, many companies used the former as a shield against the obligation to include information on sugar, salt, and fat contents in their products.

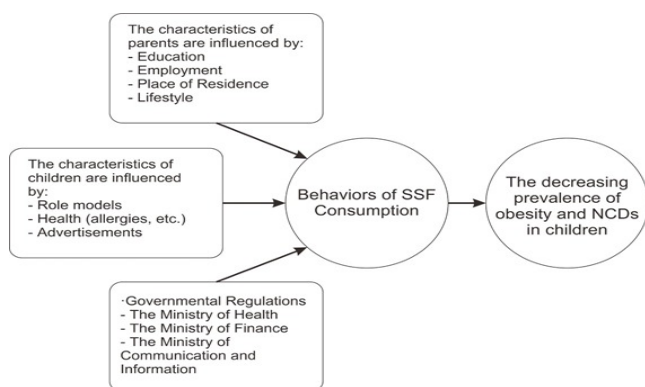


Figure 5: Influence on behaviours of decreasing NCD by policies and parent characters.

Figure 5, the decrease in SSF consumption is influenced by governmental policies, characteristics of children, as well as characteristics of parents. The government made efforts to control sugar and salt consumption by collecting duty tax. According to Law No. 39 of 2007, duty tax was state collection imposed on certain goods whose characteristics were determined in the law. These characteristics were:

- There needed to be control over their consumption;
- There needed to be supervision over their distribution;
- Their usage may bring negative impacts to society or the environment; or
- Their usage required the imposition of state collections for justice and balance.

According to Article 4 clause (1) of Law No. 39, up to now, duty tax has been imposed on three types of goods, namely ethyl alcohol, beverages containing ethyl alcohol, and tobacco products. The application and proposition of this law were crucial as it regarded the issue of health. Meanwhile, laws were in the policy and political sectors. Thus, in this case, the formulation of laws and policies on SSF depended on the grit of cross-

sectoral health in making this issue a priority. There was also a need for regulations that also contain sanctions on the violations of SSF policies considering that for children, its over-consumption was proven fatal. Thus, the imposition of tax and fines for the violation of the SSF needed to be considered (30).

The government and the legislative house's Budget Agency agreed on a policy on the imposition of duty tax (31). This duty tax must be placed on packaged sweetened drinks and plastics. It was already contained in the State Income and Expenditures of 2023. However, its implementation were to be considered based on the development of the economic condition.

An article about this has been published in the Kompas.com online news portal with the title "Sri Mulyani Sebut Minuman Manis Dalam Kemasan Berpotensi Kena Cukai pada 2023/Sri Mulyani stated that packaged sweetened drinks may potentially be imposed with duty tax in 2023." According to many experts, taxation as a policy in SSF was the best strategy for increasing children's nutritional fulfilment, increasing the value of health programs and increasing the fund of the Social Security Administering Body for Health (*Badan Penyelenggara Jaminan Sosial Kesehatan/BPJS Health*) in covering the treatment of obesity, diabetes mellitus, and other diseases due to SSF.

The taxation policy on SSF was a policy instrument in the form of regulations after the obligation to include the SSF contents considering that the uncontrolled inclusion of SSF in foods and drinks may bring diseases that are not less dangerous than the impacts of smoking. This policy was based on the basic principle that if the price of drinks and foods containing SSF overly increases, the number of people demanding them will decrease. Thus, the prevalence of diseases due to SSF will also follow suit (32).

Based on the regulations, the tax obtained from SSF products were to be allocated for health security for diseases related to SSF consumption. This was to prevent children from suffering diseases due to SSF as well as supporting the funds in treating diseases inflicted by excessive SSF consumption. The currently occurring condition was unideal as children may freely purchase SSF-containing products without restrictions over the foods and drinks that contain a high dose of those ingredients (33).

There was also a need for regulations on advertisements, just like the regulations on cigarette advertisements (34). It was found that products that are most often advertised on all channels were sugar-sweetened beverages (35). Advertisements on foods and beverages tended to be misleading. Advertisements on television or other media for children actually viewed content on cariogenic foods such as chocolate, fast foods, soft drinks, biscuits, energy

drinks, as well as other drinks that contain high levels of salt and fat. Children who watched these advertisements were more prone to suffer from tooth decay. It seemed that companies that produce foods and beverages with high SSF contents walk away without responsibility even though their products' side were as grave as those of cigarettes (36).

It was found that food advertisements influence children's preference against choices of healthy foods, even for a short time (37). A consideration in its implementation was that the Food and Drug Supervisory Agency of Semarang, Central Java Province found that around 66.7% of foods and snacks for school children in Central Java Province, Indonesia did not fulfil health requirements (38). There was samples of foods containing saccharin (artificial sweetener) and cyclamate in schools in Semarang as these schools did not undergo supervision and guidance on the sold products.

There was a need for cooperation between different ministries in the Republic of Indonesia to minimize society's consumption of SSF. This was to decrease the rate of obesity and NCDs in children. To resolve this, the Indonesian government should issue a law which regulates sanctions for producers of foods and beverages containing a high level of SSF who are dishonest in stating the SSF contents of their products. Apart from that, there should be a law which collects taxes for foods and beverages with high SSF contents to control the rate of NCDs due to excessive SSF consumption. Then, Indonesian . ministries must synergize and cooperate. The efforts that ministries may carry out include:

1. This Ministry of Health

The Ministry of Health may give intervention (for instance, through the Food and Drug Supervisory Agency) by increasing the strictness in issuing permits for foods and beverages containing high levels of SSF. It should organize random examinations on foods and beverages that are distributed in society. Then, it should monitor the suitability of ingredient and nutritional value labels on the products with the contents of the product. Apart from that, it should increase health socialization in SSF to society.

2. The Ministry of Finance

This Ministry should issue a regulation on taxes towards foods containing high SSF contents. It is hoped that through the imposition of taxation, the purchasing prices will increase. This was to decrease society's demand for such products. The funds obtained from the SSF tax collections must be allocated to health security for children suffering from obesity and NCDs related to the high consumption of SSF through the Social Security Administering Body for Health.

3. The Ministry of Information

This Ministry should issue regulations on the

advertisements of foods and beverages containing high SSF contents. It should insist producers correctly explain their products. For instance, producers of sweetened condensed creamers should not promote their products as milk. But they should promote them as sweetened beverage products containing milk as the percentage of the milk ingredient is very small.

4. BPJS Health

BPJS Health should issue regulations on the usage of funds obtained from the taxes of foods and beverages with high SSF contents. These funds should be allocated for treating people who suffer from NCDs caused by the high consumption of SSF. It is crucial to prepare such a law so that BPJS Health can use the funds from the taxes of foods and beverages with high SSF contents to provide health treatments for NCD patients due to excessive SSF consumption.

To limit the consumption of foods containing SSF, people should limit snacks, especially sweetened, salty, and fatty ones. Apart from that, it is hoped that nutrition is taught to children so that they become more interested in consuming healthy snacks. The government issued the Regulation of the Ministry of Health No. 30 of 2013 on the Incorporation of Information on Sugar, Salt, and Fat Contents as well as Health Messages for Processed Foods and Fast Foods to protect society from the risk of non-communicable diseases due to excessive SSF intake. No policies on technical guidelines including the contents of processed foods, methods of examination, and nutritional substances have been issued. Thus, this policy cannot yet be implemented by the food industries (2).

Another thing that needs to be applied is issuing policies on duty tax collection on foods and beverages containing excessive rates of SSF. Duty taxes should especially be imposed on snacks, candies, canned beverages, and foods that are often consumed by children to protect them from obesity, diabetes, and other diseases that are caused by the overconsumption of products containing high levels of SSF. The funds and taxes obtained from commodities with high SSF components should be yielded to the *Badan Penyelenggara Jaminan Sosial* (Social Security Establishing Agency, abbreviated BPJS) to fund children who suffer from non-communicable diseases. Through this method, the number of children with NDCs that are covered by the national health security will increase. On the other hand, it will decrease the consumption of the SSF. Therefore, such additional funds will strengthen the national health security in covering health security (39).

CONCLUSION

The Indonesian regulation is not strong enough in preventing children's high consumption of salt, sugar, and fat. The consumption of has currently SSF increased the prevalence of obesity and NCDs in children. There

are partially no incentives and strict law to prevent the SSF. Apart from that, there is a lack of strict sanctions, making the existing regulations suboptimum and have ineffective in binding. The daily consumption of SSF is regulated in the Regulation of the Ministry of Health No. 30 of 2013; the Regulation of the Food and Drug Supervisory Agency No. 21 of 2018 on the Category of Foods that State the Forms of SSF; Regulation of the Food and Drug Supervisory Agency No. 22 of 2019 on the Nutritional Values and Labels of Processed Foods which states that all food products must inform all nutritional labels except for alcohol. The lack of such regulations strengthens the proposition from the intention law theory of Pavlakov and Blanco, where the government has no intention to control the use of the SSF. This is shown by the government's lack of clear and strict regulations. The weakness of this research is that there are too many regulations. Therefore, it is impossible to review all laws. On the other hand, the strength of this research is that it is equipped with detailed data on the usage and consumption of salt, sugar, and fat and the percentage of national health security fund allocation for treating people with diseases related to SSF. Apart from that, it includes data on non-communicable diseases up to the latest year, namely 2023.

The authors suggest that the Ministry of Health as well as the Food and Drug Supervisory Agency should give intervention by increasing the strictness in issuing permits for foods and beverages containing high levels of SSF. Apart from that, it should increase health socialization in SSF to society. The Ministry of Finance should issue a regulation on taxes towards foods containing high SSF contents. The funds obtained from the SSF tax collections must be allocated to health security for children suffering from obesity and NCDs related to the high consumption of SSF through the BPJS Health to strengthen the national healthcare security. The Ministry of Information should issue regulations on the advertisements of foods and beverages containing high SSF contents. With this policy, the SSF consumption may decrease. Apart from that, it will be strengthen the National Health Security in handling the victims of SSF who suffer from non-communicable diseases according to the theory of intention law by Pavlakov and Blanco.

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